<u>IN THE CLAIMS</u>

Amended claims follow:

1. (Currently Amended) A computer program product ~~embodied on a tangible computer readable medium~~ <u>in a computer storage medium</u> comprising a computer program operable to control a computer to detect a known computer program within a packed computer file, said packed computer file being unpacked upon execution, said computer program comprising:

resource data reading logic for reading resource data within said packed computer file, said resource data specifying program resource items used by said known computer program and readable by a computer operating system without dependence upon which unpacking algorithm is used by said packed computer file; and

resource data comparing logic for generating characteristics of said resource data and for comparing said characteristics of said resource data with characteristics of known computer program resource data and for detecting a match with said known computer program indicative of said packed computer file containing said known computer program;

wherein said resource data of said packed computer file is processed to generate fingerprint data and to compare said <u>generated</u> fingerprint data with known computer program fingerprint data;

wherein said <u>generated</u> fingerprint data includes a number of program resource items specified within said resource data <u>of said packed computer file</u>;

wherein said <u>generated</u> fingerprint data includes a flag indicating which data is included within said <u>generated</u> fingerprint data;

wherein said <u>generated</u> fingerprint data includes a location within said resource data <u>of said packed computer file</u> of an entry specifying a program resource item having a largest size<u>;</u>

<u>wherein said generated fingerprint data includes a checksum value calculated in dependence upon:</u>

a number of said program resource items specified beneath each node within hierarchically arranged resource data of said packed computer file;

string names associated with said program resource items within said resource data of said packed computer file; and

sizes of said program resource items within said resource data of said packed computer file.

2. (Original) A computer program product as claimed in claim 1, wherein said known computer program is one of:

a Trojan computer program; and

a worm computer program.

3. (Currently Amended) A computer program product as claimed in claim 1, wherein said resource data of said packed computer file comparing logic is operable to compare said resource data with characteristics of a plurality of known computer programs to detect if said packed computer program contains one of said plurality of known computer programs.

4. (Cancelled)

5. (Original) A computer program product as claimed in claim 1, wherein said program resource items used by said known computer program include one or more of:

icon data;

string data;

dialog data;

bitmap data;

menu data; and

language data.

6. (Currently Amended) A computer program product as claimed in claim 1, wherein said resource data of said packed computer file specifies for each resource item a storage location of said resource item.

7. (Original) A computer program product as claimed in claim 6, wherein said storage location of said resource item is specified as an relative offset value.

8. (Currently Amended) A computer program product as claimed in claim 1, wherein said resource data of said packed computer file specifies for each resource item a size of said resource item.

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Currently Amended) A computer program product as claimed in claim 1, wherein said generated fingerprint data includes timestamp data indicative of a time of compilation of said known computer program.

13. (Cancelled)

14. (Currently Amended) A computer program product as claimed in claim [[9]]1, wherein said checksum value is rotated between each item being added into said checksum.

15. (Original) A computer program product as claimed in claim 1, wherein said packed computer file includes an unpacking computer program which upon execution decompresses said known computer program.

16. (Original) A computer program product as claimed in claim 1, wherein said packed computer file is a Win32 PE file.

17. (Currently Amended) A computer program product ~~embodied on a tangible computer-readable medium~~ in a computer storage medium comprising a computer program operable to control a computer to generate data for detecting a known computer program within a packed computer file, said packed computer file being unpacked upon execution, said computer program comprising:

resource data reading logic for reading resource data within said packed computer file, said resource data specifying program resource items used by said known computer program and readable by a computer operating system without dependence upon which unpacking algorithm is used by said packed computer file; and

characteristic data generating logic for generating characteristic data associated with said resource data for comparison with characteristic data of known computer program resource data to detect a match with said known computer program indicative of said packed computer file containing said known computer program;

wherein said resource data of said packed computer file is processed to generate fingerprint data and to compare said generated fingerprint data with known computer program fingerprint data;

wherein said generated fingerprint data includes a number of program resource items specified within said resource data of said packed computer file;

wherein said generated fingerprint data includes a flag indicating which data is included within said generated fingerprint data;

wherein said generated fingerprint data includes a location within said resource data of said packed computer file of an entry specifying a program resource item having a largest size;

wherein said generated fingerprint data includes a checksum value calculated in dependence upon:

a number of program resource items specified beneath each node within hierarchically arranged resource data of said packed computer file;

string names associated with program resource items within said resource data of said packed computer file; and

sizes of program resource items within said resource data of said packed computer file.

18. (Original) A computer program product as claimed in claim 17, wherein said known computer program is one of:

a Trojan computer program; and

a worm computer program.

19. (Previously Presented) A computer program product as claimed in claim 17, wherein said characteristic data generating logic is operable to generate characteristic data from a plurality of known computer programs to enable detection of any of said plurality of known computer programs within said packed computer program.

20. (Cancelled)

21. (Original) A computer program product as claimed in claim 17, wherein said program resource items used by said known computer program include one or more of:

icon data;

string data;

dialog data;

bitmap data;

menu data; and

language data.

22. (Currently Amended) A computer program product as claimed in claim 17, wherein said resource data of said packed computer file specifies for each resource item a storage location of said resource item.

23. (Original) A computer program product as claimed in claim 22, wherein said storage location of said resource item is specified as an relative offset value.

24. (Currently Amended) A computer program product as claimed in claim 17, wherein said resource data of said packed computer file specifies for each resource item a size of said resource item.

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Currently Amended) A computer program product as claimed in claim 17, wherein said generated fingerprint data includes timestamp data indicative of a time of compilation of said known computer program.

29. (Cancelled)

30. (Currently Amended) A computer program product as claimed in claim [[25]]17, wherein said checksum value is rotated between each item being added into said checksum.

31. (Original) A computer program product as claimed in claim 17, wherein said packed computer file includes an unpacking computer program which upon execution decompresses said known computer program.

32. (Original) A computer program product as claimed in claim 17, wherein said packed computer file is a Win32 PE file.

33. (Currently Amended) A method of controlling a computer to detect a known computer program within a packed computer file, said packed computer file being unpacked upon execution, said method comprising the steps of:

reading resource data within said packed computer file, said resource data specifying program resource items used by said known computer program and readable by a computer operating system without dependence upon which unpacking algorithm is used by said packed computer file; and

generating characteristics of said resource data and comparing said characteristics of said resource data with characteristics of known computer program resource data and detecting a match with characteristics of said known computer program indicative of said packed computer file containing said known computer program;

wherein said resource data of said packed computer file is processed to generate fingerprint data and to compare said generated fingerprint data with known computer program fingerprint data;

wherein said generated fingerprint data includes a number of program resource items specified within said resource data of said packed computer file;

wherein said generated fingerprint data includes a flag indicating which data is included within said generated fingerprint data;

wherein said generated fingerprint data includes a location within said resource data of said packed computer file of an entry specifying a program resource item having a largest size;

wherein said generated fingerprint data includes a checksum value calculated in dependence upon:

a number of program resource items specified beneath each node within hierarchically arranged resource data of said packed computer file;

string names associated with program resource items within said resource data of said packed computer file; and

sizes of program resource items within said resource data of said packed computer file.

34. (Original) A method as claimed in claim 33, wherein said known computer program is one of:

a Trojan computer program; and

a worm computer program.

35. (Currently Amended) A method as claimed in claim 33, wherein said step of comparing compares said resource data of said packed computer file with characteristics of a plurality of known computer programs to detect if said packed computer program contains one of said plurality of known computer programs.

36. (Cancelled)

37. (Original) A method as claimed in claim 33, wherein said program resource items used by said known computer program include one or more of:

icon data;

string data;

dialog data;

bitmap data;

menu data; and

language data.

38. (Currently Amended) A method as claimed in claim 33, wherein said resource data of said packed computer file specifies for each resource item a storage location of said resource item.

39. (Original) A method as claimed in claim 38, wherein said storage location of said resource item is specified as an relative offset value.

40. (Currently Amended) A method as claimed in claim 33, wherein said resource data of said packed computer file specifies for each resource item a size of said resource item.

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

44. (Currently Amended) A method as claimed in claim 33, wherein said generated fingerprint data includes timestamp data indicative of a time of compilation of said known computer program.

45. (Cancelled)

46. (Currently Amended) A method as claimed in claim [[41]]33, wherein said checksum value is rotated between each item being added into said checksum.

47. (Original) A method as claimed in claim 33, wherein said packed computer file includes an unpacking computer program which upon execution decompresses said known computer program.

48. (Original) A method as claimed in claim 33, wherein said packed computer file is a Win32 PE file.

49. (Currently Amended) A method of controlling a computer to generate data for detecting a known computer program within a packed computer file, said packed computer file being unpacked upon execution, said method comprising the steps of:

reading resource data within said packed computer file, said resource data specifying program resource items used by said known computer program and readable by a computer operating system without dependence upon which unpacking algorithm is used by said packed computer file; and

generating characteristic data associated with said resource data for comparison with characteristic data of known computer program resource data and detecting a match with said known computer program indicative of said packed computer file containing said known computer program;

wherein said resource data of said packed computer file is processed to generate fingerprint data and to compare said generated fingerprint data with known computer program fingerprint data;

wherein said generated fingerprint data includes a number of program resource items specified within said resource data of said packed computer file;

wherein said generated fingerprint data includes a flag indicating which data is included within said generated fingerprint data;

wherein said generated fingerprint data includes a location within said resource data of said packed computer file of an entry specifying a program resource item having a largest size;

wherein said generated fingerprint data includes a checksum value calculated in dependence upon:

a number of program resource items specified beneath each node within hierarchically arranged resource data of said packed computer file;

string names associated with program resource items within said resource data of said packed computer file; and

sizes of program resource items within said resource data of said packed computer file.

50. (Original) A method as claimed in claim 49, wherein said known computer program is one of:

a Trojan computer program; and

a worm computer program.

51. (Previously Presented) A method as claimed in claim 49, wherein said step of generating generates characteristic data from a plurality of known computer programs to

enable detection of any of said plurality of known computer programs within said packed computer program.

52. (Cancelled)

53. (Original) A method as claimed in claim 49, wherein said program resource items used by said known computer program include one or more of:
icon data;
string data;
dialog data;
bitmap data;
menu data; and
language data.

54. (Currently Amended) A method as claimed in claim 49, wherein said resource data of said packed computer file specifies for each resource item a storage location of said resource item.

55. (Original) A method as claimed in claim 54, wherein said storage location of said resource item is specified as an relative offset value.

56. (Currently Amended) A method as claimed in claim 49, wherein said resource data of said packed computer file specifies for each resource item a size of said resource item.

57. (Cancelled)

58. (Cancelled)

59. (Cancelled)

60. (Currently Amended) A method as claimed in claim 49, wherein said generated fingerprint data includes timestamp data indicative of a time of compilation of said known computer program.

61. (Cancelled)

62. (Currently Amended) A method as claimed in claim [[57]]49, wherein said checksum value is rotated between each item being added into said checksum.

63. (Original) A method as claimed in claim 49, wherein said packed computer file includes an unpacking computer program which upon execution decompresses said known computer program.

64. (Original) A method as claimed in claim 49, wherein said packed computer file is a Win32 PE file.

65. (Currently Amended) Apparatus for detecting a known computer program within a packed computer file, said packed computer file being unpacked upon execution, said apparatus comprising:

a resource data reader for reading resource data within said packed computer file, said resource data specifying program resource items used by said known computer program and readable by a computer operating system without dependence upon which unpacking algorithm is used by said packed computer file; and

a resource data comparator for generating characteristics of said resource data and for comparing said characteristics of said resource data with characteristics of known computer program resource data for detecting a match with said known computer program indicative of said packed computer file containing said known computer program;

wherein said resource data of said packed computer file is processed to generate fingerprint data and to compare said generated fingerprint data with known computer program fingerprint data;

wherein said generated fingerprint data includes a number of program resource items specified within said resource data of said packed computer file;

wherein said generated fingerprint data includes a flag indicating which data is included within said generated fingerprint data;

wherein said generated fingerprint data includes a location within said resource data of said packed computer file of an entry specifying a program resource item having a largest size;

wherein said generated fingerprint data includes a checksum value calculated in dependence upon:

a number of program resource items specified beneath each node within hierarchically arranged resource data of said packed computer file;

string names associated with program resource items within said resource data of said packed computer file; and

sizes of program resource items within said resource data of said packed computer file.

66. (Original) Apparatus as claimed in claim 65, wherein said known computer program is one of:

a Trojan computer program; and

a worm computer program.

67. (Currently Amended) Apparatus as claimed in claim 65, wherein said resource data comparator is operable to compare said resource data of said packed computer file with characteristics of a plurality of known computer programs to detect if said packed computer program contains one of said plurality of known computer programs.

68. (Cancelled)

69. (Original) Apparatus as claimed in claim 65, wherein said program resource items used by said known computer program include one or more of:

icon data;

string data;

dialog data;

bitmap data;

menu data; and

language data.

70. (Currently Amended) Apparatus as claimed in claim 65, wherein said resource data of said packed computer file specifies for each resource item a storage location of said resource item.

71. (Original) Apparatus as claimed in claim 70, wherein said storage location of said resource item is specified as an relative offset value.

72. (Currently Amended) Apparatus as claimed in claim 65, wherein said resource data of said packed computer file specifies for each resource item a size of said resource item.

73. (Cancelled)

74. (Cancelled)

75. (Cancelled)

76. (Currently Amended) Apparatus as claimed in claim 65, wherein said generated fingerprint data includes timestamp data indicative of a time of compilation of said known computer program.

77. (Cancelled)

78. (Currently Amended) Apparatus as claimed in claim [[73]]65, wherein said checksum value is rotated between each item being added into said checksum.

79. (Original) Apparatus as claimed in claim 65, wherein said packed computer file includes an unpacking computer program which upon execution decompresses said known computer program.

80. (Original) Apparatus as claimed in claim 65, wherein said packed computer file is a Win32 PE file.

81. (Currently Amended) Apparatus for generating data for detecting a known computer program within a packed computer file, said packed computer file being unpacked upon execution, said apparatus comprising:

a resource data reader for reading resource data within said packed computer file, said resource data specifying program resource items used by said known computer program and readable by a computer operating system without dependence upon which unpacking algorithm is used by said packed computer file; and

a characteristic data generator for generating characteristic data associated with said resource data for comparison with characteristic data of known computer program resource data and for detecting a match with said known computer program indicative of said packed computer file containing said known computer program;

wherein said resource data of said packed computer file is processed to generate fingerprint data and to compare said generated fingerprint data with known computer program fingerprint data;

wherein said generated fingerprint data includes a number of program resource items specified within said resource data of said packed computer file;

wherein said generated fingerprint data includes a flag indicating which data is included within said generated fingerprint data;

wherein said generated fingerprint data includes a location within said resource data of said packed computer file of an entry specifying a program resource item having a largest size;

wherein said generated fingerprint data includes a checksum value calculated in dependence upon;

a number of program resource items specified beneath each node within hierarchically arranged resource data of said packed computer file;

string names associated with program resource items within said resource data of said packed computer file; and

sizes of program resource items within said resource data of said packed computer file.

82. (Original) Apparatus as claimed in claim 81, wherein said known computer program is one of:

a Trojan computer program; and

a worm computer program.

83. (Previously Presented) Apparatus as claimed in claim 81, wherein said characteristic data generator is operable to generate characteristic data from a plurality of known computer programs to enable detection of any of said plurality of known computer programs within said packed computer program.

84. (Cancelled)

85. (Original) Apparatus as claimed in claim 81, wherein said program resource items used by said known computer program include one or more of:

icon data;

string data;

dialog data;

bitmap data;

menu data; and

language data.

86. (Currently Amended) Apparatus as claimed in claim 81, wherein said resource data of said packed computer file specifies for each resource item a storage location of said resource item.

87. (Original) Apparatus as claimed in claim 86, wherein said storage location of said resource item is specified as an relative offset value.

88. (Currently Amended) Apparatus as claimed in claim 81, wherein said resource data of said packed computer file specifies for each resource item a size of said resource item.

89. (Cancelled)

90. (Cancelled)

91. (Cancelled)

92. (Currently Amended) Apparatus as claimed in claim 81, wherein said generated fingerprint data includes timestamp data indicative of a time of compilation of said known computer program.

93. (Cancelled)

94. (Currently Amended) Apparatus as claimed in claim [[89]]81, wherein said checksum value is rotated between each item being added into said checksum.

95. (Original) Apparatus as claimed in claim 81, wherein said packed computer file includes an unpacking computer program which upon execution decompresses said known computer program.

96. (Original) Apparatus as claimed in claim 81, wherein said packed computer file is a Win32 PE file.

97. (Cancelled)

98. (Previously Presented) A computer program product as claimed in claim 14, wherein said checksum value is rotated 1 bit to the left.